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ABSTRACT

After recounting a brief history of special education trends and reviewing two early models of learning disabilities, this paper calls for and describes a holistic approach to teaching students based on their abilities rather than their disabilities. It describes how psychologists of the 1960s viewed learning disabilities as a product of deficient psychological processing, and how professionals began to assess these processes. The paper proceeds to the 1970s and recounts the behaviorist theory of teaching reading by breaking the task into component parts and then teaching by curriculum objectives centered on specific tasks. Viewing the 1980s, the paper describes how cognitive strategy theories were pieced together from various other theories. Finally, it lists and describes current problems in the field--reductionist models, division of learning, and deficit-driven assessment and instruction--and proposes a holistic model for instruction that directly counters these notions. (CRH)

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Redefining Learning Disabilities:

An Holistic Perspective

Mary Poplin

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Redefining Learning Disabilities: an Holistic Perspective

Mary Poplin

My intention today is to extend last year's discussion of learning disabilities into the future, the 1990s. I'll seek to accomplish this by elaborating upon the ideas I proposed as the forerunners of holistic thought in special education at last year's Reading Conference.(1) First, I will quickly review two early models of learning disabilities and then spend the bulk of the time we have together defining *two* distinct cognitive models — the cognitive strategy model and the holistic model. I knew so little of these models last year that the entire discussion scarcely covered a page in the yearbook. However, I was like a good democrat — I might not have known what I believed, but I certainly knew what I did not believe. Sometimes our discomfort with the present system is our only signal for change. For years professionals may writhe around with symptoms of paradigm change and yet actually modify very little. Such has been the case with learning disabilities.

One of the learning disability professional's most disturbing preoccupations comes from our past and present emphasis on eligibility criteria. I suspect the discussions of operational criteria for eligibility, while taking up most of our research journals, ultimately provide little more than a series of rationalizations we can all use to defend what we are doing and are going to do anyway. As our colleagues Ysseldyke and Algozzine (1981) have noted, we do not place youngsters in special education because of their test scores, but rather after they have been tested and sometimes despite the test results. For every child in learning disabilities with erratic WISC profiles and low achievement scores, there are two others who have the same scores but are never so placed.

If one is expecting me to criticize that practice, one will be disappointed. If I were to criticize the placement of children in special education and particularly learning disabilities, it would be to criticize it in its entirety — to rant and rave because the

rest of the school is not flexible enough to keep the little Pac Man addicts in the regular classroom. However, if we are to continue special education classes, I'd rather see the decisions made by a group of teachers than by a group of tests. As inflexible as some educators may be, they certainly are not more inflexible than the questions on standardized intelligence and achievement tests.

Of course, this flexibility also allows for discrepancies and discriminations. As the new economics and right wing conservatism continue to decrease funds in other special programs such as bilingual and compensatory education, we will see more children from these programs finding their way into learning disabilities classes — not because they are learning disabled but because our schools are culturally and experientially emaciated. As our culture becomes more diverse, the discrepancy widens between what teachers know and have experienced and what the children know and experience. Special education will continue to be a holding tank until the time comes, indeed if it ever comes, when the schools can operate from children's experiences. We have not yet admitted that the world is not the same as when we went to school, and in desperation, we cling to those notions despite new technologies that have revolutionized learning everywhere but the schoolhouse.

In the 1960s, of course, we were far too busy looking into the brains of children to see the problems of special education within any larger context. During this time, professionals viewed learning disabilities as a product of deficient psychological processing. It was believed that problems in learning to read, write, and calculate stemmed from inherent psychological process problems, such as visual perception (e.g., visual figure-ground, visual-motor coordination, visual discrimination, and association and/or memory), auditory perception (e.g., auditory discrimination, association, memory, and figure-ground), motor perception (e.g., balance, flexibility, coordination, and strength), and sensori-motor integration. These problems were presumed to be the result of dysfunctions that had specific, identifiable correlations in the brain.

In the 1960s, professionals began to identify students with learning disabilities by assessing these psychological processes. Tests were created and administered to measure each of them. Of course, no one in education has ever assessed any ability that they subsequently do not intend to teach. Such it was with learning disabilities; soon materials catalogs and classroom

cabinets were full of books, games, ditto, and exercises designed to teach all the various psychological process abilities.

Not so surprisingly now, none of these tests of materials have been shown effective. The tests we used did not differentiate good learners from poor and, what is worse, most have very poor reliability and validity in and of themselves. The activities we undertook to teach psychological processing have not been shown to increase even those processes they purport to represent. Even more serious, these programs could not show that children who received process training became any more ready for academic school tasks.

Then came the 1970s and the behaviorists became prominent in special education. Behaviorists proposed that the way to teach children to read was to take the activity of reading and break it into its component parts or behaviors. Once reading was broken into curriculum objectives, it was further reduced by "task analyzing" all the bits of behavior that went into the performance of the task. Special educators moved from thinking almost exclusively about parts of brains to thinking almost exclusively about parts of curriculum.

Much of our learning disability curricula goals and objectives are merely modifications of regular class curricula. Learning disability goals and objectives represent regular classroom curriculum reduced to its smallest and often most meaningless components. While we have found that by applying the principles of reinforcement to these task analyzed skills, we can "train" students to perform certain behaviors, we have not demonstrated the relevancy of behaviors to overall school achievement. In fact, there has been a reluctance to research the long term results of "learned behaviors." Thus, the questions remain, do students maintain these discrete academic and social behaviors and do students generalize these "learned" behaviors to any other settings or contexts?

Last year I stopped here and started slinging the words holism and cognition and cognitive strategies around much like one slurs a word one does not know quite how to pronounce. However, throughout the last year I have, with the help of my colleagues and graduate students, better defined things. There's nothing like a group of hungry graduate students to make one define one's terms — if not for the sheer joy of intellectual pursuit — for survival! Of course, the same is true of any classroom, children or adults. This is why we often remark: "You never know so much about a topic until you have to teach it."

Now, however, having had their help, I believe I am prepared to try out some new ideas with this ominous group and stand back for questions, corrections, comments, and suggestions.

Perhaps the most disturbing thing in these new reflections is the appearance of an entirely new model that indicates both a move toward holism and a distortion of it. I shall call the new model several things: cognitive strategies, learning strategies, and cognitive behavior modification (CBM, as it is affectionately abbreviated). Now, some of you may laugh, but there are people who believe they can modify cognition or train people to help them modify their own. That's very nice of the CBM researchers, but it reminds me of a paragraph in Tom Wolfe's *Even Cowgirls Get the Blues*, in which a character is musing over what a delightful toy is one's brain, meanwhile enumerating all the things people can do with their brains. The brain, Wolfe goes on to say, is only dangerous when someone else wants to reach over and play with your own. That's a bit of the way I feel about attempts to "modify cognition."

The encouraging part of the cognitive strategies model is that there is recognition, acknowledgement, and emphasis given the role of student action and initiative in one's own learning. There is at least lip service paid to the fact that learning is accomplished best when it comes from within the student, when the student is actively engaged in learning rather than acting as a passive receptor.

The cognitive strategies movement (1980s)

Insofar as there was disillusionment and frustration over the failures of the psychological process and behavioral models to demonstrate maintenance and generalization of skills, the stage was set for the emergence of yet another model to explain, diagnose, and treat learning disabilities. Added to it was a growing body of research suggesting that the *manner* or ways in which one approaches and deals with a learning task is every bit as important as the accuracy of requisite academic behaviors.

Perhaps the best way to describe the perspectives of persons who advocate a cognitive or learning strategy approach is to note how the focus of instruction differs from the behaviorist's focus. Reid and Hresko (1981) state that the difference between the two groups is that cognitive strategists' primary concern is with "how" a person learns while the behaviorists' concern is for "what" a person learns. Rather than teaching pupils correct answers, strategists seek to teach students to create and apply

strategies that will help them think through and become actively involved in the solution of problems.

The notion that the most important goal of education is to teach persons ways of going about finding and using facts rather than merely remembering specific facts is not a new one. Knowing *all* the answers is not only impossible, but it obviously presupposes that (1) there always are correct, verifiable answers or simple facts; and (2) the school decision makers are competent to decide which facts would be most beneficial to learn. The position that schools should emphasize the "process" of learning is one that is familiar to readers of Dewey, Spencer, Bruner, Piaget, and others.

The cognitive strategy model that has emerged to identify and train the learning disabled to actively develop and apply learning strategies is based on these premises as well. Meichenbaum (1980), one of the leaders of the cognitive strategies approach, stated the purpose this way:

> The hope was that by "going cognitive," namely by supplementing the behavior management programs by means of self-instruction training or by means of social problem solving training, educators would obtain the generalization and maintenance effect that have previously eluded their grasp (p. 84).

In order to accomplish this purpose, the cognitive strategists developed their ideas from bits and pieces of the theories of Piaget and Inhelder, Kagan, Budoff, Rotter, Kohlberg, and others.

In order to emphasize the processes by which one learns and creates an instructional technology, advocates of the cognitive strategy approach have sought a sort of marriage between certain principles within cognitive psychology (e.g., metacognition, executive functions, attribution theory, computer models of information processing, encoding, and memory) and certain behavioral techniques (e.g., observation, direct measurement, self-instruction, task analysis, time on task, and reinforcement). Whenever such marriages are undertaken there is inevitably a new vocabulary for educators to learn. You can see here why special educators love this model — heaven forbid we should try to help children learn to read rather than to manage their meta-cognitions.

Reassessing the facts and fallacies of both the behavioral and psychological processing models, the theories of Joseph Torgesen (1979) spurred the introduction of the cognitive strategy model

into the field of learning disabilities. Torgesen has suggested that what one observes as the problems of the learning disabled may not be the result of either deficit psychological processes (e.g., memory, discrimination, association and/or modality) or deficit skill behaviors (e.g., phonics, sight words, and math behaviors), but rather an inability or ignorance of when and how to call upon these aptitudes and abilities at the appropriate moments. In Torgeson's (1979) words, the learning disabled:

> . . . may not have developed the cognitive and emotional characteristics necessary to adapt to the requirements of a task and use active and efficient strategies (p. 519).

By 1978, the profound influence this model was to have on the field of learning disabilities had become evident. Three of five major federally funded learning disability research institutes in the United States were heavily influenced by this model. The University of Virginia team of researchers led by Daniel Hallahan sought to target strategies that might enhance selective attention. In 1978, Hallahan defined cognitive strategy techniques as a "blend of modeling, reinforcement, verbal self-instruction, and training in the use of problem solving strategies" (p. 77). A second major research institute relying heavily on the strategies model was begun at the University of Kansas by Donald Deshler. Deshler, Alley, and their colleagues studied the effectiveness of strategies directly applicable in secondary academic school settings, such as defining main ideas, outlining, note taking, and other study skill strategies (generally referred to as learning strategies at the University of Kansas Institute). The researchers at the University of Illinois at Chicago Circle, under the leadership of Tanis Bryan, studied the social strategies used by youngsters, both normal and learning disabled. Of course, in addition to the researchers at these institutions, other professionals have studied and advocated the various cognitive strategies perspectives within the field of learning disabilities, including Wong, Keogh, and Swanson.(2)

The assumptions of this approach regarding the education of the learning disabled are somewhat different than that of the behavioral model, despite the fact that behavioral technology is often applied to train persons to use cognitive strategies. The strategist assumptions are as follows:

1. Efficient learners actively engage in developing and applying specific strategies that allow them to locate, learn, remember, and generalize information to solve problems. Learning disabled students appear passive in their approach to many

learning tasks or problems. They either lack the awareness of such strategies, develop inefficient ones, and/or are slow or fail to develop or apply such strategies.

2. Effective strategies can be defined by observing and interviewing "good learners," and these strategies can then be assessed by observing and interviewing the learning disabled person.
3. Once defined, efficient strategies can be taught by pairing the principles of self-instruction and reinforcement with the appropriate strategy(s).
4. Upon learning these strategies, the learning disabled will generalize to other situations and, thus, become more efficient learners.

Of course, no one undertakes the assessment and instruction of cognitive or learning strategies with so shallow a hope as teaching the individual strategy itself; rather it has been hoped that students will apply the single learning strategies they are taught to many other learning tasks. In this way it has been hoped that cognitive strategy training could circumvent the generalization and maintenance problems of other models, particularly the behavioral model. Knowing techniques to attend to task or to comprehend and remember what one read seemed far more utilitarian than learning bit-by-bit specific pieces of information. However, to date the research on cognitive strategy training with the learning disabled looks as bleak as does the behavioral research. Advocates of this model are also depressed by the lack of generalization and question whether any technique will ever aid the disabled in academic learning.

The reductionist models

At the end of analysis one is tempted to become quite smug about noting the distinctions of each model under which learning disability professionals have operated (e.g., the psychological process, behavioral and cognitive strategy). One is quick to lose that smugness when one realizes that the similarities between each of these models are far more striking than their differences. Taken together, each clearly defines the general philosophic position taken by the learning disability profession since its inception. The positions these models have in common include:

1. An attempt in each case to divide learning into segments (sequential skills, developmental steps, or sequences of strategies).

2. Instruction aimed primarily at meeting school goals rather than life needs.
3. Assessment, evaluation, and special instruction conducted only for the purpose of seeking and remediating deficits and disabilities.
4. Insufficient evidence of generalization and maintenance.

Division of learning

The notion that learning can be broken into parts is not new. It is exemplified by the very structure of the typical school day. Each "subject," including reading, is taught separately from all the others. Even more disturbing, "reading" is seen as equally distinct from written expression, spelling, literature, and grammar, which are also viewed and executed as separate subjects. The distinction is still made today, despite the considerable evidence suggesting that each of these areas of language develop simultaneously and, in fact, complement and embellish the other.

The tendency to categorize and subcategorize learning has led special educators time and again into the same trap. Thus, in the 1960s, professionals in learning disabilities proposed divisions in the psychological processes of the mind (presumably related to distinct areas of the brain). In the 70s, having noted the ineffectiveness of the psychological process model, we began to define the categories, tasks, and subtasks that were observable in reading, math, and even the socialization process. Worried about the failure of students to integrate them into meaningful reading, writing, math, and social behaviors across time, setting, and tasks, special educators once again sought to divide the learning process into "strategies."

In an effort to define our observations and translate them into a learning environment, we have bastardized the wholeness, the spontaneity, and the excitement of learning. Learning, when broken down into processes, objectives, and strategies becomes meaningless, for in doing so, we divorce it from the child's previous experiences, information, interests, and talents. Shuy (1981) comments that for many years adult curriculum developers have held the same fallacious assumption that the smaller one can break down a learning task, the simpler it will become. That simply is not what the child development literature or children tell us.

School goals

Because "special education" is the creation of the public school system, it is not surprising that emphasis has been given to those goals, associated with schooling for normal children, i.e., reading, math, and writing. Although most school goals emphasize the importance of developing the potential of each individual student, most go about doing so in ways which emphasize this important goal indirectly, at best. For example, that student who *cannot* learn to read the print of the English language is not prevented from becoming familiar with the texts of good literature. There is little provision for a non-reader of normal or above intelligence to become acquainted with the ideas of Sylvia Plath, Shakespeare, Gabriel Garcia Marquez, Doris Lessing, or Virginia Wolfe. Nor do we allow students who cannot *write* to deliver orally their own ideas or their answers to questions. In other words, the higher cognitive functions of the sciences, humanities, and arts can be accessed in school only through print. Before the technological explosion which has brought us such things as television, taped books, films, etc., our insistence on achieving knowledge through print may have been a more valid requirement.

Because special education is part and parcel of the school system and more importantly, because learning disabled students today are so often "mainstreamed" in regular classrooms, our attention is even more intensely directed to the goals and objectives of the regular classroom. Learning disability specialists have little time to examine critically the curriculum being selected and have even less opportunity to choose substantially different goals and objectives. I am, of course, suggesting here that the goals and objectives we have uncritically adopted need closer inspection.

Deficit-driven assessment and instruction

Thirdly, all of the previous models under which the field of learning disabilities have operated are deficit-driven. Diagnosis, assessment, and instruction all focus upon pinpointing problems and disabilities. Naturally, as in any field (e.g., medicine, psychology, and education), whatever factors are assessed are also treated. If our intent was *not* to dwell on the problems of individuals, we would not spend so much effort and so many resources to locate them. If a student who has a reading problem is diagnosed and classified for "special" services, then it is almost guaranteed that he/she will be subjected to even more

hours of reading instruction. Then, need we ask ourselves why students with learning disabilities do not like school, become disinterested, depressed, or truant? Of course, the only deficits that are selected for assessment or remediation are those that help meet school ends; a student who is not talented in music or art is rarely a candidate for special education.

Failure to generalize

Lastly, and most revealing, there has been virtually no evidence to suggest that our remedial efforts have long term positive effects. While the behavioral models can demonstrate at least the short-term retention of specific subskills of reading, math, and writing, there is still little to suggest that these subskills are maintained for any length of time, generalized across settings and tasks, or ever become integrated or assimilated into the student's own life interests and goals. There is even less convincing evidence that psychological processes, as we define and teach them, are learned or integrated into the lives of students. Cognitive strategy research is plagued by the same problems as its behavioral predecessors. Perhaps if we utilized better the worlds of children and adolescents as a base for our instruction, students would see relevance for practicing and applying the objectives we select as targets for instruction.

The holistic model

Diametrically opposed to the reductionist view of education is the holistic view. Rather than being derived from an empiricist perspective, like the reductionists, the holistic perspective is grounded in structuralist philosophy. Structuralism emphasizes the role of the individual in structuring or building meanings from their own experiences. In educational philosophy, structuralism, or holism (also called constructivism), is somewhat akin to the broader and more dynamic concepts of Deweyian, Brunerian, and Piagetian ideas of education and learning.

The holistic explanation for learning is a dynamic one where the most critical variable in learning is the collective experiences of the learner. In addition to past and present experiences, other variables recognized as having effects on learning include physical variables (e.g., genetics and the integrity of the nervous system), personality characteristics of the learner and teacher, natural interests, physical characteristics of the setting, abilities, talents, and aptitudes.

The search for meaning, the building of one's own meanings and structures for incoming information, and the integrity of the mind in solving problems are all emphasized in the holistic view of education. Because the role of the learner in constructing meaning is viewed as the single most critical and relevant variable, the holistic model (more than any other) stresses that learning best occurs where there is active involvement in the learning task.

Ideally, of course, special education would not exist where a truly holistic view of education prevailed; therefore, the task of defining holism in learning disabilities is made even more difficult. And, in fact, the assumptions of a special education classroom will not be different from those assumptions of the holistic regular public school classroom, a college science classroom, or in a teacher training program. In this discussion of holism in special education I have tried to follow the same outline as that used earlier in discussing the psychological process, behavioral, and cognitive strategy models. Because these assumptions are relatively new to most of us who think of ourselves as "special educators," I encourage you to play with these different ideas regarding the diagnosis, assessment, and instruction of students. Holistic assumptions regarding the education of students with learning disabilities might include the following:

1. Learning disabilities are the result of some inopportune interaction between the child's neurology, previous experiences (in school and other environments), interests, personalities, aptitudes and abilities and the experiences, goals, physical characteristics, personalities, interests and abilities in the learning environment. (Note that if we were being true to the holistic philosophy we would omit the words "disabilities" and "some inopportune" and leave the holist view of learning.)
2. Informal assessments and inventories are made of the child's previous experiences, interests, personalities and current abilities.
3. Instruction is designed from knowledge of these interests, abilities and experiences (including the selection of classroom placement, teacher, and materials). Goals of instruction and criteria for performance emphasize successful completion of goals necessary in adult life.
4. The desired result of holistic instruction is a more happy, well-adjusted growth and learning-oriented human being.

The differences between special education under the holistic model and current special education methods and procedures are drastic. First of all, there are no attempts to break subjects into curriculum objectives or task analyses; more importantly, there are no attempts to break education or learning into subjects (e.g., reading is not separated from writing or social studies). The object or goal of special education will not be directed toward being re-placed in the regular classroom or passing competency or other achievement tests. Curriculum is not viewed as a set series of objectives to be met by using a limited array of materials. Instead, curriculum structure is more an inherent knowledge of child and adolescent development and the experiences, talents, and interests of the individual students. The teacher is responsible for bringing new, relevant, and interesting experiences to the student that encourages the gaining of competence in a wide variety of possible abilities.

The most dramatic of all changes to be effected by adopting a holistic view of learning disabilities is the change in attitude from the deficit-driven assessment and instruction to an ability-driven model of instruction. Rather than special educators identifying and explicating problems, weaknesses, and disabilities, the holistic model emphasizes the assessment of student strengths and interests and the matching of these *ability* characteristics with educational programming.

The holistic model can be successful only to the degree that we can dramatically depart from the past. It asks us to shed artificial notions regarding divisions in learning. Perhaps the most difficult and revealing task will be the extent to which we can shed deeply rooted assumptions that the purpose of special education is to cure specific disabilities. We must look on special education not as preparation for schooling but as life itself, leading to the gradual improvement of the quality of that life.

NOTES

1 See *40th Yearbook of the Claremont Reading Conference*, 1982, pp. 41-52.

2 See special volumes of *Topics in Learning and Learning Disabilities*, 1982, Volume 2, Numbers 1 and 2.

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